



Ø BEAT

COLO. SPRINGS,
COLORADO

NOVEMBER 1967

ANNUAL AUCTION OF RADIO GEAR SLATED FOR MEETING

* * *
NEW DIRECTORS, OFFICERS CHOSEN FOR COMING YEAR
* * *

Although the next meeting of the PPRAA, November 8, is a long way from St. Patrick's Day, green will be a very important color that evening--the green being the color on back of those pieces of paper printed by the U. S. mint and bearing the pictures of U. S. presidents.

The "greenbacks" will come in handy to PPRAA members at the meeting to purchase the items of radio and electronic gear to be auctioned at the annual PPRAA auction to take place at the meeting.

Since, as has happened in past PPRAA auction nights, the auctioning is expected to take up the major portion of the evening and no other program is planned, other than the regular business meeting.

Pete Demario, KØUDG, Bill Haski, KØCEN, and Oak Stockton, KØROL, who have ably handle the auctioneering for the PPRAA in the

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PPRAA directors to serve for the next two years were elected at the October meeting and they, with the directors whose terms expire next year, selected the PPRAA officers for the next year, in accordance with the PPRAA by-laws.

The nominating committee had named John Summers, WAØHHN, Ed Pompea, KØZPG, and George Kowalski, WØGCH, for reelection and Harold Combs, filling in as secretary for Bill Kraft, now in Thailand with the USAF, for a member of the board. New Nominations were Rosemarie Lewis, WAØMNL, Bruce Cushman, WØIXH, and Rudy Wroblewski, WAØPJC.

Since Ed Pompea had left for a new residence in New Jersey and no further nominations had been made by PPRAA members, that left six candidates for the six director vacancies, Max Main, WØBDH, retiring president, therefore declared the six elected.

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Ø BEAT

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The PPRAA meets on the second Wednesday of each month in the Red Cross Center, 1600 N. Cascade Ave., starting at 8 p.m. All radio amateurs and other interested persons are invited.

COPY DEADLINE for the DECEMBER Ø BEAT will be November 29.

EditorialA LACK OF INTEREST?

The very poor attendance at the October meeting for the election of directors of the PPRAA was, to our way of thinking, a demonstration of a very poor lack of interest by members of the club in its "well being."

Without the proper directors and officers to direct the activities of a club, it can amount to little. Without the backing of the members of a club, its directors and officers can accomplish little.

Perhaps some of the members stayed away from the voting with the excuse that "The nominating committee had the directors all hand-picked, my favorite wasn't among them, so why should I bother to attend the meeting?"

If such was the case, that argument won't "hold water." The PPRAA by-laws provide for the nomination of additional candidates by means of a written nomination signed by three members. Yet NO one bothered to use this means of nominating any "favorite."

Let us hope that the poor showing at the election in October is not any indication of the amount of support which will be given to the PPRAA and its directors in the coming year. If it is--- don't expect much of the club.

BOARD OF DIRECTORS

Pres. - John Summers, WAØHHN
Vice Pres. - George Kowalski, WØGCH
Secty. - Rosemarie Lewis, WAØMNL
Treas. - Bruce Cushman, WØIXH

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Pete Demario, KØUDG, Chairman
Max Main, WØBDH
Rudy Wroblewski, WAØPJC
Harold Combs, WAØPNR

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It is up to every member of the club to attend as many meetings as possible and participate in as many of the club's activities as possible to show that it does not take a convention or a special program to get the members of the PPRAA together to make this one of the most active clubs in the Rocky Mountain Region.

---Frank, WØHWH

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ADVANCE, EXTRA STUDY QUESTIONS

An ARRL-published list of study questions for the new Advanced Class license and new study questions for the Extra Class license was recently received by the PPRAA. Accompanying the questions was the explanation that since the new license manual with the new questions would be a short time in forthcoming, the questions were being sent to ARRL-affiliated clubs to assist those interested in the new license exams until the new manual was published.

The first segment of the study questions for both classes is being reprinted in this issue of Ø Beat. The rest of the questions will appear in the next issue.

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Don't forget the annual PPRAA's auction Nov. 8. Bring your unused items, your cash and yourself!

ADVANCED CLASS QUESTIONS

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Part 97 of the Commission's Rules which governs the Amateur Radio Service.

What is a good indication that a high standing wave ratio (SWR) is present on a transmission line? Where is the best point on a long transmission line to measure the SWR?

What methods are most commonly used to generate single sideband signals? Draw a block diagram of the filter method showing all essential stages. How can a low frequency SSB signal be converted to the desired transmitting frequency?

What happens to the voltage, current and impedance along a transmission line with an SWR of 1?

What are harmonics? How can the generation of excessive harmonics be avoided?

What factors affect the state of ionization of the atmosphere?

What types of emissions can be received with selectable sideband receivers?

The ratio of the peak envelope power in an SSB signal is primarily dependent on what?

How can a receiver sensibility and selectivity be improved?

How close to the edges of a certain amateur band can you operate a VFO c.w transmitter if you are using a frequency meter having possible maximum error of 0.01 percent?

A transmission line that feeds an antenna has a power loss of 10db. If 10 watts are delivered to the transmission line input, how much power is delivered to the antenna? List possible causes of power loss. How can the SWR of the line be made as low as possible?

How do parasitic oscillations affect circuits? What can be done to prevent or eliminate parasitics?

What is backwave radiation? How

can it be eliminated?

Define maximum usable frequency.

A resistor, capacitor and inductor each have 100 ohms of resistance or reactance. What is the equivalent series impedance of these three elements?

What do oscilloscope patterns showing 24%, 50% and 75% modulated signals without distortion look like?

What are some common types of oscillators employed in amateur equipment? How can each be identified in circuit diagrams? What part does feedback play in these oscillators? What points in the circuits should be coupled to provide good feedback?

Why is neutralization important in amplifiers? What points in an amplifier circuit should be coupled to provide good neutralization?

When is an amplifier operating Class A? Class B? Class C?

What happens to even-order products in r.f. linear amplifiers?

What is a third party agreement? What countries have such agreements with the United States?

What are lissajous figures in oscilloscope operation? What scope patterns would be produced if the signal applied to the horizontal input has a frequency equal to two, three and four times the frequency of the signal applied to the vertical input?

How are bypass capacitors used? How should its impedance compare to the element it shunts?

How can TVI caused by cross-modulation be remedied?

How can SSB signals be amplified with little or no distortion?

How does a full wave bridge rectifier operate? What is the schematic diagram of this rectifier circuit?

What circuit factors affect the peak envelope power of a transmitter?

How can the resonant frequency of an antenna be increased? Decreased?

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EXTRA CLASS QUESTIONS

What are sideband frequencies? During 100% sinusoidal amplitude modulation, what percentage of the average power is in the sidebands?

What do the modulation envelopes of amplitude-modulated waves with 75 %, 100% and greater than 100% modulation look like?

How may a limiter be employed in an FM receiver?

What precaution(s) should be taken when measuring the rectified grid voltage in an oscillator with a d.c. voltmeter?

What is meant by frequency shift keying and how is it accomplished?

Why is there a practical limit to the number of stages that can be cascaded to amplify a signal?

What are A5 and F5 emissions? On what amateur frequencies can these emissions be transmitted?

How does amateur TVI usually affect television reception?

In what section of a properly operating SSB transmitting system is distortion most likely to originate?

What is the meaning of the time constant in a resistance-capacitance circuit?

How does a squelch circuit operate? Draw a commonly used squelch circuit.

An oscilloscope is used to study the relationship between the input and output of an amplifier produced by a voice signal. How would the scope pattern display a linear relationship?

Draw a block diagram of an RTTY system showing the function of each stage. That is the proper way of identifying an RTTY transmission?

How can the two-tone test output of a linear amplifier be used to tell if a transmitter is working properly?

Define the alpha cut-off frequency

of a transistor. How is this parameter of use in circuit design?

How does the positioning of a powdered iron tuning slug affect the frequency of the oscillator it is tuning?

Define the deviation ratio in a frequency modulated signal.

What type of signal will be produced when the output of a reactance modulator is coupled to a Hartley oscillator and multiplied in frequency?

How would the reception of a single sideband signal be affected if the carrier is not completely suppressed?

How does the beat frequency oscillator affect the tuning of a single sideband signal?

Can a lossy transmission line be used to transmit signal? Explain.

How can you distinguish between a product and an envelope detector?

How can a receiver be adjusted for SSB reception when the receiver does not have a product detector?

How do mica and paper dielectric bypass capacitors compare at different frequencies?

How do filter capacitors made of mica and paper compare at different frequencies?

Where in a receiver should a limiter/blanker stage be placed to provide maximum utility?

What frequency should a crystal oscillator circuit be tuned to for maximum stability?

What determines the fundamental operating range of a multivibrator?

What does the term "power factor" mean in reference to electric power circuits?

What factors determine the frequency at which a quartz crystal will oscillate.

Explain the properties of a quarter-wave section of f.f. transmission line.

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OSIE'S REPORTINGS

By Rosemarie Lewis, WAØMNL

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Glenn Glasscock, WØFA, of Denver, sends cw practice daily on 3653 at 7:30 p.m. MST. Speeds range from 10 to 30 words per minute.

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Cecil Wood, WØTV, fell and suffered painful injuries, including a broken right arm (not right but wrong, Cecil says.)

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Jay Hall, WØCOB, while on his annual hunting trip to the Saguche National Park Basin, provided a service net. He set up his amateur station at the famous landmark called the Salt House, where all hunters would be passing. On a sign he announced he'd be glad to send any messages out of the area. Jay hunted as well as providing this service and in Jay's absence a hunter could leave his message on a bulletin board. Then when Jay came in he sent out the traffic and if there was a return message, post it on the board for the hunter to pick up. The system proved worthwhile and the amateurs in the area were most enthusiastic about helping. It has been suggested that a project like this might be undertaken by PPRAA.

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Edterrien, WØLOT, a new PPRAA member, has returned to Colorado Sprgs. after a tour of duty in Thule, Greenland, as RCA site manager. Ed first became licensed in 1941 as W1NTI and is a member of the Quarter Century Association. Other calls he has held are W6LJL, WØJGJ, W7DBS, W1NTI (for second time) W2AGB, and OZ5AJ. Rigs are SB 100 and SB 200. Hobbies are hunting, fishing, and would rather trap than eat. Also likes to putter with radio controlled boats and hopes to find time to fly model planes. He is married and has 3 children at home. (Ed's XYL added girl watching as one of Ed's hobbies and Ed dared me

to submit it to the editor).

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Phil Hermanson, WAØQGI (Queer GI are his phonetics) began Army basic training at Fort Bliss, Texas.

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Bob Roney, WAØCGV, stopped by for an eyelash QSO while in town to visit his folks. Bob is a second lieutenant and will be taking flight training soon.

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Jerry Thatcher, WAØMME, is on a tour of duty with the Army in Germany.

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I have QSL cards, undeliverable by the post office, for the following persons: WØUVO, Bill; WAØIQR, Joe; WNØRGD Doug. Anyone able to supply me with information--please contact me, fone 632-5721 or at the club meeting.

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Steve Parker of Colorado Springs is a new novice--WNØSIZ.

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A Sunday CEP Net checkin was the Framington, New Mexico, Radio Club on a field day venture to Four Corners National Monument. K5WXL, Al, was portable 5, portable Ø and portable 7, simultaneously.

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Larry Lewis, WAØDGL, is enjoying his work with Launance Radiation at the University of California.

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PRESIDENT'S COLUMN

I wish to thank the club for the honor bestowed upon me as the new club president for the coming year.

The newly elected officers will need your assistance in many instances, especially from those who have held these offices in the past. We will also need your comments, pro and con, on various matters.

At the October club meeting I stated that we had been approached by Mr. Sullivan, audio-visual instructor
(Continued on next page)

PRESIDENT'S COLUMN

(Continued from Page 5)

for the Colorado Deaf and Blind School, to help in teaching c. w. to the blind so that they might get their ham tickets.

I must make this report as most amaxing. We held a c. w. class for an hour Sunday afternoon, Oct. 14, having some 18 blind students attending. Their minds and ears were very perceptive and within the hour they had learned the alphabet and numbers.

They were able to detect simple words such as and, the, us, been, etc. before the class was dismissed for the afternoon.

As progress increases, assistance may be needed in some form or another, but at this printing, arrangements are yet in the making for a definite time schedule that will work in with the students' school curriculum.

My final word is--see you at the club auction at our November meeting. Bring your firends, your money and your goodies.

---John, WAØHHN

AUCTION

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past, are expected to be auctioneers for this meeting.

Items to be auctioned should be tagged with the name os the seller. Ten per cent of the sale price will go into club funds.

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OFFICERS, DIRECTORS

(Continued from Page 1)

The directors then met during the coffee break to select the officers for the coming year. John Summers was selected as president, George Kowalski as vice president, Rosemarie Lewis as secretary and Bruce Cushman as treasurer, with Pete Demario selected as chairman of the board of directors.

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FOR SALE---EICO Model 127 xmtr, 90 watts max. output, with one crystal. Four band Globe receiver. Highest offer will take either or both.

Gary Henry Fone 635-2746

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